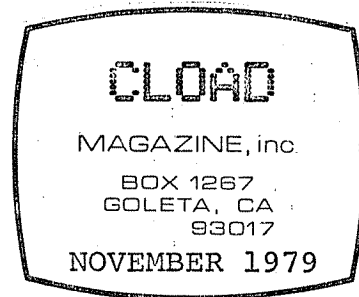


Here's November!

This month we have a special treat for you level II owners - a mail list program designed for a cassette based system. This is the most significant program we have ever published, and I'd like to converse a bit on why serious application programs are rare in a magazine format such as ours.



The first, and most significant reason, is one of traceability. We absolutely cannot risk publishing a program of a serious nature unless we know that the person submitting it is the true author. In this case, the author is a local programmer whose abilities and ethics are beyond reproach.

The second difficulty involves the concept of liability, or who is responsible if a software bug gets someone's business in trouble with the I.R.S. or some other evil force. In this case, we can state that the program has been used for some time in actual practice. No better test of a program exists. --> \*However:\* <-- We will NOT - repeat NOT - accept responsibility for the failure of anyone's business, social club, personal relationship, or mental composure over the use of this program.

Yet another obstacle is documentation. In this case, the information necessary to use this program is at the end of this article. Those of you who have questions or troubles with either the program or the documentation included, please forward them to us in a letter (no telephone calls, please). Assuming that there are a sufficient number of questions (likely), we will answer them in a question/answer form and either publish it or mail it to those who write us on the subject (whichever one appeals to our base instincts at the time). If you wish to report a bug, please be very, very specific. "Trouble with the blah function" doesn't cut it.

For those computer bums who think that mental prestidigitation is the one true purpose of personal computers, we have a level I offering this month of cryptic arithmetic. This is the old game of letting a letter stand for a one digit number, and spelling out a problem. Fr'instance:

CLOAD  
X      FUN  
= PROGRAMS

So that you level II types don't feel left out, we have a related program on the flip side. It's called Psycho-Logic, and it's related to Crypt-Arithmetic the way a headache is related to a prefrontal lobotomy. Half the battle is understanding the instructions, which have been (you won't believe) very carefully re-written to be as clear as possible. After several tries, I was able to scroll the instructions by paying particular attention to the "press the key to continue" message (don't press it unless you're invited). Anyone with an I.Q. of 180 or higher should be able to understand the instructions by January.

Those people who can handle either of these offerings should check into the field of pure mathematics. It's a very pattern-and-concept intensive discipline.

For the rest of this month, I'd like to talk about timesharing.

Time sharing is a venerable old institution that dates back to the Kemeny and Kurtz sermons at Dartmouth College in the fifties. They were promoting the concept that, since computers were faster than a speeding IBM salesman, they should be able to work with more than one mere mortal at a time. Believe it or not, up until then a large computer costing oodles of money spent most of its time waiting for more input from its sole operator (or waiting for repair). Timesharing allowed several people, say a dozen, to use the computer at one time, and since the computer was zipping along at Warp Three nobody noticed that any speed was lost when the computer ran off to service other people. A new language was developed for this system, called BASIC. It took the revolutionary step of allowing a program to be written, run, rewritten and rerun all in one session! If you can imagine a two day wait between typing RUN and getting your results back, you've got a taste of what computerists were putting up with at that time.

This new mode of computing was called "interactive", as it seemed to be a question-and-answer session with the computer, rather than the traditional line-it-all-up-and-pray mode that was occasionally called "batch" and was more often called other things.

Computerists, just as lazy then as they are now, eventually set up a system such that they could call up the machine on the telephone and not have to trudge through the snow to the computer center. This required each home user to have a "terminal" and a "modem" (and, of course, a telephone). A terminal was usually a TeleType machine. It was called a terminal because of the effect its purchase had on one's personal bank account. A modem was, and still is, a doodad about the size of a large book with some rubber cups into which one crammed a telephone handset. "Modem" (pronounced MOW-dum) stands for "modulator/demodulator" which is harder to spell, and which essentially means talk/listen.

Computer centers liked this arrangement. The operators had fewer people around, which meant fewer dumb requests, fewer rubber band fights to clean up after, and more time for their own nefarious projects. The social aspect of computing started a downhill trend which has continued to this day - a pity. I've met some very interesting people at three A.M. at the local center. Today there are many computer centers devoted solely to "dial up" users.

There are timeshare services, and then there are timeshare services. As an example, in the Los Angeles area there are about a hundred of them listed in the yellow pages. Anyone with a TRS-80, an expansion interface with an RS-232 circuit and a modem can communicate with them. As with most things, there are both good and bad points to them.

Bad things first: They are expensive. Fifteen dollars an hour is considered a fair to good rate, with program and data storage being extra. They are often busy when you want to "dial up", as they are obviously under pressure to get as many customers on line as possible. If you get on when a lot of others are also on, the computer's response time gets from sloooooow to downright lethargic. For those who have never had the privilege of operating a computer for just the cost of electricity, these problems are endurable for lack of a better system to compare to.

Advantages: The maintenance is invisible, being performed by the gang that floats in at 6 A.M. - after the night freaks have crashed and before the business types start work. The computer work space is large. Programs

which use literally megabytes of memory can be run on some systems. A large array of peripherals are available, such as high speed printers, plotters, and occasionally even typesetters.

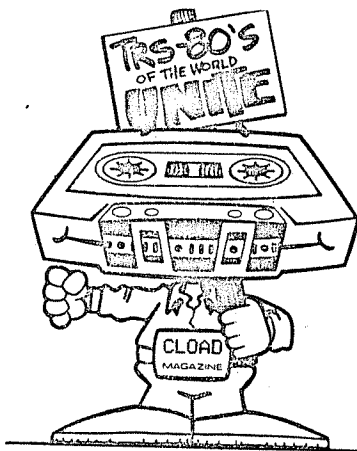
The software available on some of these systems is capable of the traditional accounts payable / accounts receivable / general ledger games that the business types so dearly love to play. The maintenance on this software is also largely invisible to the user, and it is every bit as important and necessary as the maintenance on the hardware.

A special case of timesharing services is the Source, by Telecomputing Corporation of America at 1616 Anderson Rd, McLean, VA 22102. It can be accessed toll free from most of the urban areas in the continental U.S. and offers the usual assortment of languages and applications software. What separates this service from the rest of the crowd is both information (notably recent UPI news) and communications. The news aspect is interesting in that the articles can be selected on any arbitrary subject. The communications aspect is nice in that so many forms can be accommodated. You can "chat" with another user who is "signed on" anywhere in the continental U.S., you can leave a message for another person (or yourself) in a disk file, you can write a letter on your computer and have it mailed at the city nearest the destination, and if you're "out of town", you can call a toll-free number and leave a message verbally, which will appear in any desired subscriber's file. I'd rate this one at about five on a scale of ten. Their entry fee of \$100 puts them in the professional/serious amateur category. If you're just looking for more computer power, try locally. If you're a technofreak, go to it!

See you next month!

*Tracy*

Ralph McElroy, Publisher



## MERRY HOLIDAY!

The **Total Mind of All TRS-80's That Be** would like to take this occasion to compute a prediction of a happy and prosperous new year for you, subject to the following clarifications: One, that a year is defined as 365.24219879 mean solar days, considered to commence at some point fast approaching; and Two, that due recognition is given the fact that TRS-80's, as all other computers, celebrate the winter solstice (December 21 on the Gregorian calender). Gifts are considered to be in good taste.

(this message brought to you as a cheap promotional stunt by **CLOAD Magazine**, the only TRS-80 cassette magazine in actual existence.)<sup>1</sup>

1 year subscription (12 C-30 cassettes) (gift subscriptions accompanied with card)	\$36.00 <sup>2</sup>
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## BOARD & CARD GAMES

For years people have played board and card games. Now, with the personal computer you can learn how to play these games or always have a willing opponent. And at a small fraction of the cost of the dedicated games. These are the best programs we have found for the 16k, Level II TRS-80.

### sargon II

by Dan and Kathe Spraklen from Hayden  
The best of the micro chess playing programs that came in third in the 9th North American Computer Chess Championship! Personal Computing magazine said "Buy this program when it becomes available . . . unequaled in the end game . . ." \$29.95.

### mean checker machine

by Lance Miklus from TSE  
A quick and brilliant checker playing program. Four levels of play are in this machine language program. \$19.95.

### gammon challenger

by Ray Daly and Tom Throop from Acorn  
This backgammon player has three levels of play and many special features. A game in which it gammoned the Tryon's Gammonmaster was featured in the August issue of Personal Computing. \$14.95.

### go moko

by Phil Pilgrim from Discovery Bay  
Program plays you in the ancient Japanese game of five-in-a-row. Play on a 9 by 9 grid. \$14.95.

### code breaker

by Mikal Pedersen from Acorn  
Puzzling, challenging, exciting. A different game of determining the colors of four secret code pegs. Includes sound effects. \$9.95.

### poker pete

by David Gubser from Quality  
Play five card draw poker against animated Pete. He shuffles and deals. Pete will bluff, raise, call or fold. Watch out - Pete's got a gun! \$9.95.

### win 21

by Phil Pilgrim from Discovery Bay  
Don't gamble, learn to play expert blackjack. Includes book Beat The Dealer and comprehensive instructions. \$29.95.

### bridge challenger

by George Duisman from Personal  
You play your hand and the dummy against the Challenger in 4 person Contract Bridge. Hands dealt at random or according to your criterion for high card points. You can review tricks, swap sides or replay hands when the cards are known. An always willing opponent. \$14.95.

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from bottom shelf  
One hundred programs on 5 cassettes plus the programming language Tiny Pilot! 25 business and finance, 15 graphic, 15 home, 15 educational and 30 games. \$49.95.

## NEWDOS+

from Apparat  
This disk operating system is quickly becoming the standard. Not only are fixes made to the Radio Shack TRSDOS, but several utilities are added, including LEVEL1, EDTASM, DIRCHECK, and SUPERZAP. \$99.95.

## "TRS-80 DISK"

by H.C. Pennington  
We don't usually list books, but this one is so unique that we thought you would want to know about it. There are over 100 pages about how DOS works, how a disk is organized, and how to recover from errors. This is THE technical backup for NEWDOS with great illustrations. \$19.95.

## TUTIL & DUTIL

by Roy Soltoff from Midosys and Acorn  
The Tape Utility (Tutil) and the Disk Utility (Dutil) provide you with a powerful software aid in debugging machine language programs, in using the Radio Shack Editor/Assembler, and in performing various utility functions. Examine, clear, initialize, move, compare and modify memory data plus search memory for up to 24-character strings; punch, load, verify, run machine language programs and display file names; display and modify registers in English; add and subtract in hex; jump and set breakpoints; and interface to E/A. Output to video and printer simultaneously. Includes E/A modify program.

The Disk Utility includes these features and more. Read and write disk sectors, even to the directory track; track read, sector scroll and disk save or restore of E/A test buffer.

Tutil \$14.95 Dutil \$19.95

## COMPROC

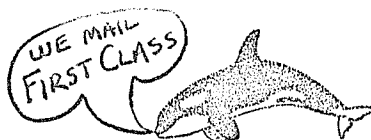
by Johnston and Johnston from Racet Computes  
Your programs can execute automatically at DOS boot. Turn on the system and be up and running. You can execute any series of DOS commands and even answer responses in a BASIC program. It makes the computer easier to use for the non-programmer. Well documented. \$19.95.

## BASIC-1P

from Small System Software  
This program provides full Level I BASIC capability in any Level II, 16k TRS-80. Plus it adds the printing commands of LPRINT and LLIST so you can now list your programs and control your printer from Level I BASIC. Two new commands, LPRINT ON and LPRINT OFF allow you to print anything that is displayed on the screen. Using only 4k of RAM, you have 12k for your Level I programs. Any Level I BASIC program or data tape may be used without conversion. All commands and abbreviations are supported. \$19.95.

## INFINITE BASIC

by Johnston and Johnston from Racet Computes  
Add 50 different string functions and 30 more commands to your Level I BASIC. \$19.95.



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Arcade video games are always fun to play. Acorn Software Products recently released versions of four popular arcade games. Alien Invasion, Block'em, and Ting-Tong all have sound effects. You'll be hearing a lot more about Acorn.



## alien invasion

by Roy Niederhoffer from Acorn  
The arcade game that you've been looking for. You shoot your laser gun at the invaders while avoiding their bombs. Game includes sound effects and graphics. Watch out for asteroids and black holes. \$9.95.

## block'em

by Joseph Moran from Acorn  
Maneuver your blockade so that your opponent crashes before you do. You get four different game options, nine speeds, and sound effects. For two players, in machine language and only 4k needed. \$9.95.

## space war

by Device Oriented Games from Acorn  
Two-player, real-time space battle lets each player control a space ship with rotate, thrust, fire, and hyperspace. Five game options (including gravity) and three speeds are included. In machine language. \$9.95.

## ting-tong

by Ray Daly from Acorn  
Ping-pong for the TRS-80. The game is for one or two players with eight speeds and includes sound effects. In machine language. Only 4k needed. \$9.95.

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## MAIL LIST

### Loading

When starting up, you must answer MEMORY SIZE? with 32600. This saves a portion of memory for a 40 byte machine language tape dumping routine that greatly increases the speed with which your lists will be stored on tape. The remainder of the memory reserved is for RS-232 drivers if you are using that type of printer. Now load the program itself. It is a BASIC program, so it is loaded with the usual CLOAD command.

After loading and typing RUN, you will be asked to specify the maximum number of items you will be working with. The answer to this question will determine the size of the array created. In this manner you can select the most appropriate size for your list which will increase the efficiency of operation. You should be careful, however, not to choose a number too small or you will run out of storage space. If this or any other unrecovered error should occur, and you are bounced out to the command mode (READY), you must be careful in re-entering the program so as not to lose the data that is already in memory. The safe entry point is GOTO (not RUN) 120. This will return you to the directory.

After defining the list length, you will be reminded to have set the MEMORY SIZE correctly (if you forgot, go back to square one and start over). This question, as most others, can be answered with a simple "Y" or "N". If you type a "Y" here, the directory of commands will be displayed. As a general rule, if the program needs a command, a one letter abbreviation is all it needs (or wants). Pressing the ENTER key is unnecessary. If the input is a multiple character string, the ENTER key must be used.

The following is a brief discription of each command:

#### 1 - display

Typing "1" will cause the computer to display the list on file. First, however, you will be asked if you want hardcopy or not. Typing "H" will route the list to the printer. If you don't want hardcopy, or don't have a printer on line, type any other character. If you press "H" and do not have your lineprinter hooked up, you will have to push the RESET button and start over.

During this listing, you can stop the display at any point by pressing the space bar. When you want to resume, type any character except "E". Typing "E" will exit this function and return you to the Directory.

#### 2 - Change

Typing "2" will allow you to change the list. You will be asked for the first characters of the item which you wish to change. You may ENTER as many characters as are necessary to define the item in question. If you want to add a new item to the list you should ENTER "ZZ". When the proper item has been found it will be displayed for reference. You will now be given the opportunity of defining individually the Name, Address, City, State (with ZIP code), and a Data statement for each entry. The ZIP code should be specified with the State string, separated by one space only, and be the last 5 characters of that entry. If you do not want to change part of an entry type only "ENTER" when asked for the new information. To delete an item, rename it "ZX" and ENTER "ZZ" for the

Address, City, State, and Data. This item will maintain its position in the list until it is alphabetized to the end. At that point, it should be renamed "ZZ". Warning: "ZZ" in the Name position is a special case and is treated as the end of file marker. If you name an item in the middle of the list "ZZ", the rest of the list will become inaccessible.

### 3 - Search

Typing "3" will allow you to search for any sub-string of any class. The classes, referred to as N,A,C,S, and D, refer to the Name, Address, City, State, and Data entries of each item. After selecting a class, you will be asked for the search string. ENTER the string (up to 255 characters) that you want the program to search for. You will also be asked whether or not you want printed copy. During the search, a cursor will blink in the upper right-hand corner of the screen to indicate proper operation. To suspend searching, press the space bar. To resume. Press any key but "E". Press "E" to exit the searching routine and return to the Directory. All items with the specified string in the specified class will be displayed, and at the end of the list a total count of all the items with this string will be displayed.

### 4 - Load

Typing a "4" will allow you to read in a list from tape. You will be given the choice of loading a new list or adding new entries to the existing list. Because of the speed with which this program stores information on the tape, it is recommended that you control the tape recorder manually. Disconnect the plug to the recorder that switches it on and off (the small one) and turn the recorder on when told to. After the list is loaded, you will be asked to turn the recorder off.

### 5 - Save

Typing a "5" will allow you to dump the current list to the cassette. As with loading from cassette, you must interrupt the automatic control of the recorder and turn it off manually.

### 6.- Sort

Typing "6" calls up the alphabetic sort routine. This routine allows you to sort the list in memory by Names, States, ZIP codes, or Data entries. If the first characters of the Data class are a date, the list will be sorted into chronological order. If you use this trick, be sure to use the same number of digits in each entry, and go from large time units to small (e.g. yy/mm/dd form, and 79/03/31 rather than 79/3/31). During the alphabetizing process a blinking cursor will be displayed to indicate proper operation. From time to time, the TRS-80 will need to re-organize its string space. When this happens, the cursor will stop blinking for several seconds. This is normal. When the sort routine is finished, the Directory will be displayed again.

If you are working with a long list, the sort routine constitutes a good excuse to get up and make a sandwich.

### 7 - Labels

Typing a "7" will print the list in the form of mailing labels, either individually or all at once. The labels printed will not contain the Data entries.